

ABSTRACT OF THE DISCLOSURE

A high-frequency power amplifier includes a first amplifier acting as an inverse Class F amplifier and having a first transistor and a first two-terminal network, a second amplifier acting as a Class F amplifier and having a second transistor and a second two-terminal network, a power distribution circuit for distributing an input signal to the first transistor and the second transistor such that a phase difference between the first transistor and the second transistor reaches about 90 degrees, a distributed line for controlling an output load of the first transistor through impedance transformation based on an operating state of the second transistor and a bias circuit provided for the first transistor and the second transistor such that different harmonic processing conditions are set in the first amplifier and the second amplifier.